

REMARKS/ARGUMENTS

Claims 34–53 remain in this application.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 34–38, 40, 42–49, and 51–53 have been rejected under 35 U.S.C. 103(a) as unpatentable over U.S. Patent No. 4,091,120 to Goodnight, Jr. et al. in combination with any one of JP 59-213364, Yokoyama et al., and Kudo et al.

The Office Action dated November 9, 2006 urges, among other things, that Goodnight, Jr. et al. discloses:

The soy protein created therein is inherently deflavored
taking into account the similarity in processing between the
instant invention and that of Goodnight, Jr. et al.

(Office Action of November 9, 2006, p. 2).

Applicants point out that Goodnight, Jr. et al. fails to disclose that the pH is maintained in the range of about 9 to about 12 under suitable filtration conditions as set forth in the instant claims. Importantly, the pH range of about 9 to about 12 should be maintained during ultrafiltration to allow as much of the flavoring compounds as possible to be removed. As presented in more detail below, Goodnight, Jr. et al. uses a pH in the range of 6.5 to 7.5 for ultrafiltration. As shown in the specification, soy material treated in the present invention at a pH of 9 to 12 provides a superior material. Thus the deflavored material of Goodnight, Jr. et al. is not the same material (inherently or otherwise) as used in the present invention. The Examiner's statement that soy protein in Goodnight, Jr. et al. is inherently deflavored is not particularly relevant; the key issue is the quality of the deflavored product in the present invention. The present invention, if properly considered in this light, cannot be obvious in view of Goodnight, Jr. et al. taken alone or in combination with cited art.

Instant independent claims 34, 48, and 51 recite that the decaffeinated soy protein is prepared by a method that includes, in combination with other steps, the following process steps:

... solubilizing soy proteins of an aqueous composition containing a soy material containing soluble soy proteins, flavoring compounds, and insoluble materials at a pH in the range of about 9 to about 12 followed by passing the aqueous composition adjacent an ultrafiltration membrane ... while maintaining the pH in the range of about 9 to about 12 under suitable ultrafiltration conditions and wherein the flavor compounds pass through the membrane and the solubilized soy proteins retained by the ultrafiltration membrane are recovered as the decaffeinated soy protein material.

(Emphasis added).

As explained in the present specification, solubilizing the soy proteins in a pH range of about 9 to about 12 is important because, in general, a pH of 9 is needed to solubilize all of the proteins, while a pH higher than 12 is likely to cause undesirable degradation of the proteins. Goodnight, Jr. et al. states that the clarified extract preferably is adjusted to a pH in the range of pH 6.5 to pH 7.5 prior to membrane filtration. (Col. 3, lines 39–42.) Goodnight, Jr. et al. also suggest that the pH 6.5 to 7.5 range for ultrafiltration “is not essential” (col. 3, lines 41–42). However, that passing comment in the Goodnight, Jr. et al. reference is never further developed, nor is an enabling disclosure for use of different pH during ultrafiltration other than one exclusively in the range of pH 6.5 to 7.5. In fact, Goodnight, Jr. et al. does not illustrate any ultrafiltration process pH value outside the 6.5 to 7.5 range.

In fact, Goodnight, Jr. et al. would have expressly guided and directed one of ordinary skill away from the present invention and instead towards using a pH of 6.5 to 7.5 during ultrafiltration by the following statement:

Membrane filtration in the range of pH 6.5 to 7.5 has the benefit of minimizing decomposition or interaction of the protein constituents of the extract during the period of membrane filtration which may require several hours.

(Col. 3, lines 42–46).

In view of at least the above, Applicants respectfully submit that Goodnight Jr. et al. fails to teach and suggest the limitations of instant independent claims 34, 48, and 51 reciting ultrafiltration processing with the pH maintained in the range of about 9 to about 12. Moreover, Goodnight, Jr. et al. teaches and leads away from that possible practice, as discussed above. It is well-established that the totality of the prior art must be considered, including portions that would teach away from the claimed invention, and proceeding contrary to accepted wisdom in the art is evidence of nonobviousness.

Moreover, Goodnight, Jr. et al. fails to teach or suggest anything about soy-containing cheese products based on compatible combinations of deflavored soy materials and natural cheese or dairy cream.

The secondary references relied upon by the Examiner fail to cure the defects of Goodnight, Jr. et al. discussed above.

JP59-213364 teaches a filmy food made by mixing one of cream, butter, margarine, and cheese uniformly with a separated soybean protein and water. Based on Applicants' review of the English abstract of JP59-213364, the cited reference fails to disclose deflavored soy protein, much less the improved quality variety obtained as the ultrafiltered (while maintained at about pH 9 to 12) solubilized soy protein material that is present in the soy-containing cheese product of the present invention.

Yokoyama et al. teaches a cheese product comprising mucous material from a yam (such as prepared by mincing, grating, or grinding the tuber of a yam) and a cheese ingredient. Yokoyama et al. divides the cheese ingredients used in the invention into three categories: natural-type cheese, filled-type cheese, or imitation-type cheese. Yokoyama defines imitation type cheeses as "produced by replacing a part or

all of both milk protein and milk fats with those derived from other than milk such as soybean protein....” Yokoyama nowhere describes products containing natural cheese or cream in combination with soy protein, much less in combination with deflavored soy protein. Moreover, Yokoyama fails to describe natural cheese or cream ingredients in an amount by weight percent greater than the soy protein (which, again, is not even a “deflavored” type). Therefore, Yokoyama et al.’s cheese product is significantly different from the presently claimed soy-containing cheese in numerous important aspects.

Kudo et al. teaches a cheese-like product containing soybeans and cheese. Kudo et al. teaches that the cheese-like product is free from soybean odor but does not teach that the cheese-like product contains deflavored soybean protein.

Regarding dependent claims 35–47, 49, 50, 52, 53, Applicants submit that the dependent claims are patentable over the relied upon references for at least the same reasons as pointed out above relative to independent claim 34.

Claim 39 has been rejected under 35 U.S.C. 103(a) as unpatentable over Goodnight, Jr. et al. in combination with either one of JP 59-213364 or Yokoyama et al. JP 59-213364 does not teach that cream is mixed with deflavored soybean protein. Yokoyama et al. does not teach the use of cream with soybean protein. As stated above, Yokoyama et al. does not teach the use of soybean protein with cream. Yokoyama et al. only teaches the use of soybean protein in imitation-type cheese products where a portion or all of both milk protein and milk fats are replaced with soybean protein.

Claims 41 and 50 have been rejected under 35 U.S.C. 103(a) as unpatentable over Goodnight, Jr. et al. in combination with Yokoyama et al. As stated above, Yokoyama et al. does not teach the use of soybean protein with natural type cheeses. Yokoyama et al. only teaches the use of soybean protein in imitation-type cheese products where a portion or all of both milk protein and milk fats are replaced with soybean protein.

Claims 41 and 50 have been rejected as unpatentable over Goodnight, Jr. et al. in combination with either one of JP 59-213364 or Kudo et al. and further together with

Yokoyama et al. The Examiner admits that Kudo et al. and JP 59-213364 are silent regarding the use of mozzarella cheese. Yokoyama et al. does not teach the use of soybean protein with natural type cheeses. Yokoyama et al. only teaches the use of soybean protein in imitation-type cheese products where a portion or all of both milk protein and milk fats are replaced with soybean protein.


In view of the above remarks, it is believed that this application is in condition for allowance, and notice of such is respectfully requested.

If the Examiner believes that a telephonic or personal interview would be helpful in the present case, the Examiner is requested to telephone Applicants' attorney at the telephone number set forth herein below.

The Commissioner is hereby authorized to charge any additional fees which may be required in the Application to Deposit Account No. 06-1135.

Respectfully submitted,
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